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June 24, 2012

Henry Pittner
AECOM
999 Town & Country Road, 4th Floor
Orange, CA 92868

Subject: Supplemental Air Quality Analysis for the James A. Musick Facility Expansion

Dear Mr. Pittner:

LSA Associates, Inc. (LSA) has prepared the following supplemental air quality analysis to update the information provided in Environmental Impact Report (EIR) No. 564 (August 1996) for the James A. Musick Facility (JAMF) Expansion project. EIR 564 analyzed air quality conditions assuming that the Marine Corps Air Station (MCAS) El Toro base was an active military base. The EIR did not contemplate reuse of this site. Changes in land uses surrounding the jail site have occurred since 1996, including the approval of The Great Park, Heritage Fields, and proposed development within the Cities of Irvine and Lake Forest. As such, future air quality conditions for the JAMF Expansion have been updated as part of this analysis.

INTRODUCTION

Project Site

The JAMF site is located at 13502 Musick Road in central Orange County within a 100-acre (ac) unincorporated area abutting the Cities of Irvine and Lake Forest. The project site is bounded by the former MCAS El Toro (now called The Great Park Neighborhoods) to the west and Bake Parkway to the east. The Great Park is located entirely within the jurisdictional boundaries of Irvine. The planned extension of Alton Parkway will form the northwest boundary of the JAMF site. The project location is illustrated in Figure 1. The existing JAMF has 1,256 beds. Approximately 1,024 beds would be added during Phase I of the JAMF expansion in 2014 (i.e., a total of 2,280 beds). Under build-out conditions, a total of 7,584 beds would be provided on site. The proposed project site plan under interim (year 2014) and build-out (year 2030) conditions is illustrated in Figures 2 and 3, respectively.

Background

Expansion plans for the JAMF were approved in 1996. Operations and structures at the JAMF remain relatively unchanged from the existing conditions described and presented in the 1996 EIR 564. However, at that time, the use considered for the MCAS El Toro site was an international airport. The previous MCAS El Toro is now The Great Park, a planned community with residential, commercial, business, and regional park uses in Irvine.

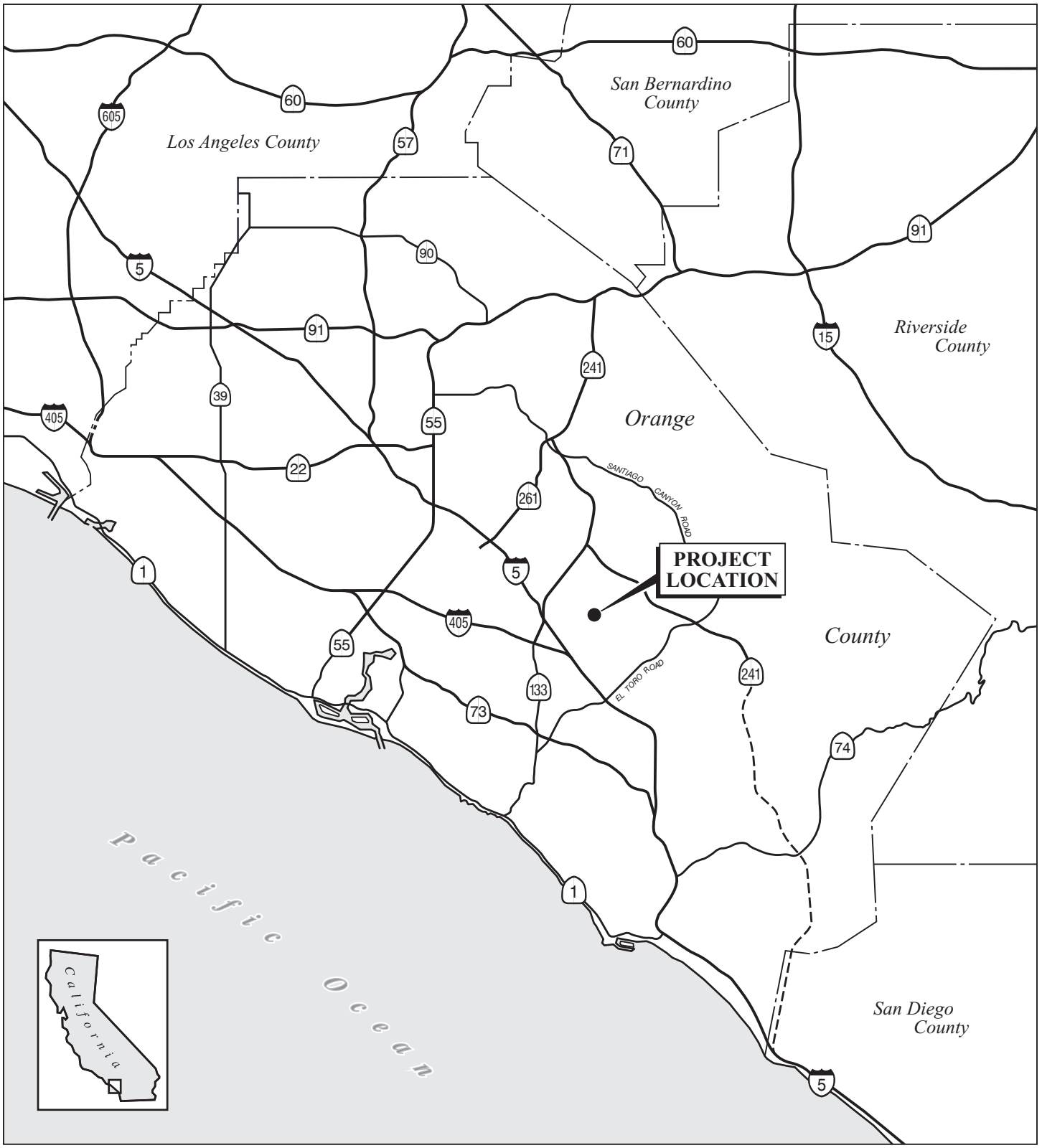

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FIGURE 1

Musick Jail Expansion

Regional Location

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KEYNOTES:

1. NEW ENTRANCE
2. NEW STAFF AND VISITOR PARKING LOT
3. NEW STORM WATER DETENTION BASIN
4. NEW INTERIOR ACCESS ROAD
5. MAIN BUILDING- HOUSING AND SUPPORT

LSA

FIGURE 2

N

0 200 400

FEET

SOURCE: AECOM, 2012

Musick Jail Expansion

Phase 1 of JAMF Master Plan

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KEYNOTES:

1. WORKER HOUSING COMPLEX
2. INMATE PROGRAM
3. VIDEO VISITATION
4. FACILITY ADMINISTRATION
5. STAFF TRAINING
6. ELECTRICAL YARD
7. CENTRAL PLANT
8. FACILITY MAINTENANCE
9. COMMISSARY
10. LAUNDRY
11. CENTRAL WAREHOUSE
12. FOOD SERVICE WAREHOUSE
13. FOOD SERVICE PRODUCTION
14. INMATE SERVICE ADMINISTRATION
15. FUTURE SHERIFF'S STATION
16. FUTURE 2-STORY PARKING GARAGE
17. KENNEL
18. FUTURE ICF
19. INMATE WORKER HOUSING
20. MAIN BUILDING- HOUSING AND SUPPORT

MAIN BUILDING- PHASE 1

LSA

FIGURE 3

N

0 200 400

FEET

SOURCE: AECOM, 2012

Musick Jail Expansion

JAMF Master Plan

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With the previously assumed airport no longer being implemented, Lake Forest reevaluated land uses on seven properties that were previously constrained by land use restrictions associated with military aircraft operations. This study was called the Vacant Land Opportunities Phase III Study, and was originally approved in 2006 and revised in 2008. Many of the land use changes included conversions of land uses that were not aircraft/flight-sensitive (i.e., commercial, industrial, and business park) to residential and/or a mix of residential and various uses.

In addition to redevelopment of the MCAS El Toro site and land use changes at the seven Lake Forest properties, the approved extension of Alton Parkway between Irvine Boulevard and Towne Centre Drive have altered the assumed future air quality conditions of EIR 564. The Alton Parkway Extension EIR 585 was approved in 2007. Construction of the undeveloped segment of Alton Parkway will commence in 2009 and will be completed prior to the first phase of the JAMF Expansion.

This supplemental air quality analysis is based on data from the Supplemental Traffic Impact Analysis, which used data from the approved EIR 564, the Alton Parkway Extension EIR 585, and the Lake Forest Vacant Land Opportunities Study used to reflect updated existing and future air quality conditions. Existing 2004 conditions were referenced from the recently approved Alton Parkway Extension EIR 585, which more accurately reflects current roadway conditions than the 1996 EIR 564, the original analysis of the JAMF expansion. Additional General Plan build-out data was obtained from the Vacant Land Opportunities Study, which did not include an evaluation of the JAMF. The Alton Parkway Extension EIR and the Vacant Land Opportunities Study are the two most recent documents that analyze the currently proposed land uses of the areas surrounding the JAMF site. Therefore, these documents have been used to evaluate proposed development and land use changes that have occurred since 1996.

AIR QUALITY SETTING

Although some of the settings included in the 1996 EIR 564 have changed, their status does not affect the analysis and findings of this Supplemental Air Quality Analysis. This report will focus on the potential for project-related regional air quality impacts. The proposed project is within the South Coast Air Basin (SCAB) and thus is subject to a review with respect to the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP). The SCAB comprises all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties.

FUTURE ANALYSIS METHODOLOGY/APPROACH

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. SCAQMD’s current guidelines, CEQA Air Quality Handbook, April, 1993, were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in EIR 564 are from 1996; therefore, the current version of the CalEEMod model, version 2011.1.1, was used, incorporating data from the Supplemental Traffic Study (LSA, April 6, 2009) to estimate project related mobile and stationary sources emissions in this air quality assessment.

The air quality assessment includes estimating emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts, i.e., higher CO concentrations (CO hot spots) near intersections or roadway segments in the project vicinity, would be small and less than significant due to the generally low ambient CO concentrations in the project area. A local CO hot spot analysis was conducted. Project specific information was used in the modeling. Default values representative of the proposed project were used when project specific data were not available.

The net increase in pollutant emissions determine the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with federal and State ambient air quality standards.

The SCAQMD has developed LST methodology that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area. SCAQMD's current guidelines, *Final Localized Significance Threshold Methodology* (June 2003), were adhered to in the assessment of air quality impacts for the proposed project.

The LST mass rate look-up tables are used to determine whether the daily emissions for the proposed construction and operational activities could result in significant localized air quality impacts. The emissions of concern from construction activities are NO_X and CO combustion emissions from construction equipment and fugitive PM_{10} dust from construction site preparation activities. The primary emissions from operational activities include but are not limited to NO_X and CO combustion emissions from stationary sources and/or on-site mobile equipment. Off-site mobile emissions from the project are not included in the emissions compared to the LSTs.

THRESHOLDS OF SIGNIFICANCE

Based on Guidelines for the Implementation of California Environmental Quality Act, Appendix G, Public Resource Code §15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any ambient air quality standards, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

In addition to the federal and State AAQS, there are daily and quarterly emissions thresholds for construction and operation of a proposed project in the SCAB. The SCAB is administered by the SCAQMD, and guidelines and emissions thresholds established by the SCAQMD in its CEQA Air Quality Handbook (SCAQMD, April 1993) are used in this analysis. It should be noted that the emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emission thresholds

are regarded as conservative and would overstate an individual project's contribution to health risks. Table A shows the CEQA significance thresholds that have been established for the Basin.

Table A: SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
ROCs	75 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
NO_X	100 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day

Source: SCAQMD, 2009.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides

Projects in the Basin with construction- or operation-related emissions that exceed any of the emission thresholds should be considered to be significant under CEQA.

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase one-hour CO concentrations by 1.0 part per million (ppm) or more or eight-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State one-hour CO standard of 20.0 ppm
- California State eight-hour CO standard of 9.0 ppm

Thresholds for Localized Significance

For this project, the appropriate Source Receptor Area (SRA) is the Saddleback Valley area. LST analysis for construction is applicable to all projects of 5 ac or less. If emissions exceed the LST for a 5 ac site, then air dispersion modeling needs to be conducted. While the total site is approximately 100 ac, the construction operations are limited to a small portion. Thus, for the LST analysis, 5 ac LST thresholds are used. The use of a 5 ac site model result in more stringent LSTs because

emissions would occur in a more concentrated area closer to the nearest sensitive receptors than would occur in reality. Projects larger than 5 ac can determine the localized significance for construction by performing dispersion modeling for emissions that exceed the localized air quality standards.

LST receptor locations include residential, commercial and industrial land use areas; and any other areas where persons can be situated for an hour or longer at a time. These other areas include parks, bus stops, and side walks but would not include the tops of buildings, roadways, or permanent bodies of water such as, oceans or lakes. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as residence, hospital, convalescent facility were it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees do not typically remain onsite for a full 24 hours, but are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM_{10} is appropriate not only because the averaging period for the state standard is 24 hours, but because, according to the SCAQMD's definition, the sensitive receptor would be present at the location for the full 24 hours.

Since a sensitive receptor is considered to be present onsite for 24 hours, LSTs based on shorter averaging times, such as the one-hour NO_2 or the one-hour and eight-hour CO ambient air quality standards, would also apply. However, LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours. This assumption is consistent with the CO hotspots modeling protocol, which requires modeling at receptors that may also include commercial and industrial sites.

Thus, for situations where commercial or industrial sites are closer than sensitive receptors where an individual could remain for 24 hours, thresholds for CO and NO_2 should be for the distance to the commercial or industrial site and for PM_{10} and $PM_{2.5}$ for the distance to the sensitive receptor.

The closest existing sensitive receptors are approximately 1,000 ft (305 meters [m]) to the west of the project site; therefore, LST thresholds for PM_{10} and $PM_{2.5}$ were interpolated using the 200 and 500 m distances. Additionally, there are existing office/industrial uses approximately 100 ft adjacent to the project site. Thus, LST values for CO and NO_X at 25 m were used. Table B shows the LST thresholds for the Saddleback Valley area.

Table B: Saddleback Valley LST Thresholds

Air Pollutant	Threshold (lbs/day)	
	Construction	Operation
CO (at 25 meters)	1,804	1,804
NO_X (at 25 meters)	197	197
PM_{10} (at 460 meters)	138	34
$PM_{2.5}$ (at 460 meters)	82	20

Source: SCAQMD, 2009.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District

FUTURE CONDITIONS WITH PROPOSED PROJECT

Phase 1 (Year 2014) Air Quality

Air quality impacts would occur during the construction of the proposed project from soil disturbance and equipment exhaust. Major sources of emissions during grading and site preparation include: (1) exhaust emissions from construction vehicles; (2) equipment and fugitive dust generated by construction vehicles and equipment traveling over exposed surfaces; and (3) soil disturbances from grading and backfilling. The following summarizes construction emissions and associated impacts for the project site.

Construction Equipment Emissions

Construction activities produce combustion emissions from various sources such as utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions.

Construction activities associated with development occurring on the project site would temporarily increase localized PM_{10}, ROC, NO_X, and CO concentrations in the project vicinity. The primary sources of construction-related ROC and NO_X emissions are gasoline- and diesel-powered, heavy-duty mobile construction equipment such as scrapers and motor graders. Primary sources of PM_{10} emissions would be clearing activities, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth surfaces.

Emissions generated from construction activities are anticipated to cause temporary increases in pollutant concentrations that could contribute to the continuing violations of the federal and State maximum concentration standards. The frequency and concentrations of such violations would depend on several factors, including the soil composition on the site, the amount of soil disturbed, wind speed, the number and type of machinery used, the construction schedule, and the proximity of other construction and demolition projects. Since this project consists of modifications to the existing industrial building and site, the construction equipment required will be much less than what is usually used for conventional warehouse construction.

Fugitive Dust

Fugitive dust emissions are generally associated with grading exposure, vehicle and equipment travel on unpaved roads, and dirt/debris pushing. Dust generated during construction activities would vary substantially depending on the level of activity, the specific operations, and weather conditions. Sensitive receptors, such as residents and students in the project vicinity and on-site construction workers, may be exposed to blowing dust, depending on prevailing wind conditions.

Phase 1 Construction Emissions Summary

The CalEEMod model was used to calculate the construction emissions for Phase 1, with the results shown in Table C. While not all details of the construction schedule are known, only 1.1 ac will be graded and development of the proposed project site will require a small amount of fill along the west facing screen wall. Rough and final grading will occur prior to construction of any infrastructure.

Table C: Peak-Day Construction Emissions for Phase 1

	Total Regional Pollutant Emissions, lbs/day						
Construction Phase	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Demolition	10	84	51	0.09	17	4.0	9,600
Site Preparation	3.7	29	18	0.03	4.0	2.8	3,000
Grading	5.9	45	29	0.05	5.2	3.7	5,000
Building Construction	7.2	47	41	0.08	5.5	2.8	7,600
Architectural Coating	10	3.0	3.9	0	0.68	0.26	600
Paving	5.5	30	21	0.03	2.8	2.6	3,100
Peak Daily Emissions	17	84	51	0.09	17	4.0	9,600
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**	**No Threshold**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**	

Source: LSA Associates, Inc., June 2012.
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides

Additionally, while there is not expected to be any subterranean excavation (e.g., utility trenching and construction of water quality basins) it has been included in case some amount is needed.

Using an estimated schedule to characterize the construction of the project, Table C shows the daily construction emissions for Phase 1. These emissions assume all standard construction control measures will be implemented, such as SCAQMD Rule 403 for dust control. Refer to Appendix A for construction analysis details. It is also assumed that the construction phases do not overlap other than architectural coating will occur as part of the overall building construction.

Table C shows that it is not expected for any of the SCAQMD daily emissions thresholds to be exceeded during construction of Phase 1.

Build Out Construction Emissions Summary

Using an estimated schedule to characterize the construction of the project, Table D shows the daily construction emissions for Project Build Out. These emissions assume all standard construction control measures will be implemented, such as SCAQMD Rule 403 for dust control. Refer to Appendix A for construction analysis details. It is also assumed that the construction phases do not

overlap other than architectural coating will occur as part of the overall building construction operation.

Table D: Peak-Day Construction Emissions by Phase for Project Build Out

Construction Phase	Total Regional Pollutant Emissions, lbs/day						
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Demolition	6.4	46	39	0.09	15	2.0	9,600
Site Preparation	2.4	17	13	0.03	3.2	2.0	3,000
Grading	3.8	25	24	0.05	4.6	2.4	5,000
Building Construction	11	65	93	0.28	22	2.9	27,000
Architectural Coating	34	2.1	9.5	0.02	3.2	0.22	2,400
Paving	3.0	17	20	0.03	1.3	1.1	3,100
Peak Daily Emissions	45	67	102	0.3	25	3.1	29,400
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**	**No Threshold**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**	

Source: LSA Associates, Inc., June 2012.
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides

Table D shows that it is not expected for any of the SCAQMD daily emissions thresholds to be exceeded during construction of the Project Build Out.

Localized Significance Analysis. Table E shows that the emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ on the peak day of construction for both Phase 1 and Project Build Out will result in concentrations of these pollutants below LSTs.

Table E: Construction LST Impacts (lbs/day)

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
Phase 1 On-site Emissions	71	43	5.4	3.7
Build Out On-site Emissions	40	34	4.4	2.4
LST Thresholds	**197**	**1,804**	**138**	**82**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., May 2012.
Source Receptor Area: Saddleback Valley, 4 acres, 100 foot distance
ac = acres
CO = carbon monoxide
ft = feet
lbs/day = pounds per day
LST = local significance threshold
m = meters
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Thus, there is not expected to be a significant air quality impact from any aspect of construction of either Phase 1 or the Project Build Out.

LONG-TERM REGIONAL AIR QUALITY IMPACTS

Regional Significance. Long-term air emission impacts are those associated with stationary sources and mobile sources involving any project-related change. The ARB and EPA approved model, CalEEMod, was used to calculate these emissions. The model was set to reflect the SCAB parameters for 2012 and reflected all applicable regional default assumptions. The emission factors used by CalEEMod are from the ARB approved EMFAC2007 model. Although project-specific variables may be used, regional defaults tend to be the most conservative and acceptable when evaluating programmatic impacts such as in this sustainability study. This computer model projects emissions rates for motor vehicles based on the year of analysis, a projected vehicle fleet mix, projected vehicle speeds, whether these emissions are projected to occur during the summer or the winter months, and other factors. These emissions were calculated using the projected ambient temperature range. Assumptions used in preparing the model analysis were consistent with those recommended in SCAQMD's CEQA Air Quality Handbook.

The proposed jail area source emissions include the combustion of natural gas for heating and the use of landscape maintenance equipment. Approximately 2,280 beds will be provided in Phase I in 2014 (i.e., the addition of 1,024 beds from existing conditions). The added 1,024 beds are expected to result in 737 additional average daily trips (ADT). Assuming the traffic rate from the existing 1,256 beds is the same as the rate used in the Supplemental Traffic Analysis (LSA, April 2009) for Phase 1, the total ADT will be 1,641 trips. A summary of 2016 project emissions, a combination of the existing plus Phase 1, is shown in Table F, which shows that none of the pollutants will exceed the SCAQMD daily thresholds. Therefore, no significant air quality impact is anticipated and no mitigation measures would be necessary. The 2016 CalEEMod worksheets are provided in Attachment A.

Table F: Phase 1 Regional Operational Emissions

	Pollutant Emissions, lbs/day					
Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	8.9	0	0	0	0	0
Energy	0.05	0.42	0.36	0	0.03	0.03
Mobile	7.5	18	68	0.13	15	0.93
Total Project Emissions	**17**	**18**	**68**	**0.13**	**15**	**0.96**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., June 2012.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides

General Plan Build-Out (2030) Air Quality

It is expected that the analysis of construction emissions above will also apply to the General Plan Build-Out, because, while the end result of this phase will be a much larger facility, the daily construction operations characterized above for Phase 1 will apply throughout the construction of all of the proposed jail expansion.

Future General Plan build-out (2025) project emissions are shown in Table G. The 2025 CalEEMod worksheets are provided in Attachment A. Under the build-out condition, the total number of beds provided on site is 7,584 (which includes the bed count from existing and Phase 1, the Sheriff station and Interim Care Facility), consistent with the maximum number of beds analyzed and approved in EIR 564. This is expected to result in 5,457 ADT. As shown in Table G, none of the pollutants will exceed the SCAQMD daily thresholds. Therefore, no significant air quality impact is anticipated and no mitigation measures would be necessary.

Table G: General Plan Build-Out Regional Operational Emissions

	Pollutant Emissions, lbs/day					
Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	12	0	0	0	0	0
Energy	0.53	4.8	4.1	0.03	0.37	0.37
Mobile	16	35	120	0.40	45	2.5
Total Project Emissions	**29**	**40**	**120**	**0.43**	**45**	**2.9**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., June 2012.

Note: Due to an error in the CalEEMod model, the area ROG emissions reported above are listed in the model output in the unmitigated section whereas the rest of the output reported above are from the mitigated section.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides

Localized Significance. Table F shows the calculated emissions for the on-site sources for the proposed operational activities compared with the appropriate localized significance thresholds. Following the SCAQMD methodology, this LST analysis only includes emissions produced on the project site, whereas the regional analysis includes both on-site and off-site emissions. The same model, CalEEMod, was used for this analysis; however, this model does not provide a way to single out the on-site emissions. The average trip length from the CalEEMod model ranges from 7.4 to 15.4 miles, and assuming a typical onsite travel distance of 500 feet (which is 0.6 to 1.3 percent of the total trip length), it was assumed that 2 percent of the total project traffic occurs on-site. Table H is the combination of the area sources shown in Tables F and G and the on-site portion of the mobile sources for each scenario.

Table H: Summary of Operation Emissions, Localized Significance

Scenario	Emissions Rates (lbs/day)			
	CO	NO_X	PM_{10}	$PM_{2.5}$
Phase 1 On-site emissions	3.4	0.90	0.75	0.05
General Plan Build-Out On-site emissions	6.0	1.8	2.3	0.13
Localized Significance Threshold	**1,830**	**197**	**24**	**13**
Significant?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., June 2012.
CO = carbon monoxide
lbs = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

Table H shows that all operational emissions rates are below the LST thresholds for both Phase 1 operations and after the Buildout is completed. Therefore, the proposed operational activity will not cause any long-term, locally significant air quality impacts.

REQUIRED MITIGATION MEASURES AND/OR RECOMMENDATIONS

New Mitigation Measures

Based on the results of the air quality analysis, expansion of the JAMF can be implemented without significantly impacting either the regional air quality or the local pollutant concentrations in the 2016 (Phase I) and 2025 (build out) horizons. Thus, mitigation is not required.

Implementation Status of Previously Identified Mitigation Measures in EIR 564

EIR 564 identified 14 mitigation measures (2, 4–13, and 15–17, listed below) for the JAMF project when expansion of the JAMF was approved in 1996, all related to construction operations. This supplemental analysis shows that with implementation of all required standard emissions controls measures during construction (described in SCAQMD Rules 402, 402, 1113 and 2202), no additional mitigation measures are necessary.

2. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors use low emission mobile construction equipment, where feasible.

4. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors water the graded sites and that equipment is cleaned morning and evening.

5. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors wash off trucks leaving the site.

6. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors spread soil binders on graded sites, unpaved roads and parking areas.

7. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that chemical soil stabilizers are applied by contractors according to manufacturer1s specifications to all inactive construction areas (previously graded areas which remain inactive for 96 hours).

8. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that ground cover planting be established on the construction site by contractors through seeding and watering on portions of the site that will not be disturbed for lengthy periods (such as two months or more).

9. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require the contractor to sweep streets if silt is carried over to adjacent public thoroughfares. This measure prevents emissions rather than reduce emissions.

10. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less.

11. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to suspend grading operations during first and second stage smog alerts.

12. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to suspend all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

13. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors maintain construction equipment engines by keeping them tuned.

15. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors provide on-site power sources during the early stages of the project to minimize or eliminate the use of portable generators.

16. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.

17. At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to use low emission on-site stationary equipment (e.g., clean fuels).

CONCLUSIONS

Based on the results of this supplemental air quality analysis, the consideration of new land use and circulation changes surrounding the JAMF site will not affect the results and conclusions as presented in EIR 564. Implementation of Phase I (i.e., the addition of 1,024 beds) in 2016 and build out of the JAMF site (i.e., a total of 7,584 beds) would not cause any significant impacts.

If you have any questions, please call me at (949) 553-0666.

Sincerely,

LSA ASSOCIATES, INC.

Ronald Brugger
Senior Air Quality Specialist

Attachment: CalEEMod Input and Output